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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,126	03/17/2000	Noriyoshi Satoh	32439	2947

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PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

ORGAD, EDAN

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/528,126

Applicant(s)

SATO ET AL.

Examiner

Edan Orgad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/21/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 4/21/05 have been fully considered but they are not persuasive.

Applicant 1st argues that none of the references disclose or suggest a radio terminal device comprising both "a resin housing covering the rear surface of the printed board" and "a metal housing covering the front surface of the printed board" as recited in claims 1 and 5.

With respect to applicant's first argument, examiner respectfully disagrees. Jochheim specifically teaches a printed circuit board 7 for the acceptance of radiofrequency components and logic assemblies of the radio device is arranged between the half shells 5 and 6 lying on one another. The lower shell 6 must therefore be employed as shielding in order to achieve an EMC shielding. Jochheim further teaches that soldered shielding frames, shielding plates, metallized plastic housings, diecast housings, etc. In other words, Jochheim discloses the rear surface of the printed, figure 1, element 7, is covered by a plastic "housing" or shell 6 and the metal shell or "housing" element 5 is made of metal and covers the front surface.

Applicant further argues that none of references disclose "a part of the printed board is accommodated in the metal housing" and "a part of the rear surface side of said printed board is accommodated in the resin housing". Examiner respectfully disagrees, Jochheim specifically disclose the lower shell 6 must therefore be employed as shielding in order to achieve an EMC shielding. In the illustrated exemplary embodiment, the lower shell 6 comprises two shielded chambers 8 and 9. Furthermore, the lower shell 6 is manufactured by extrusion coating and

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back-injection of a wire weave 10. A wire weave 10 is fitted to the housing part 6 to be shielded. The wire weave 10 and housing part 6 are then introduced into an injection mold. All surfaces of the wire weave 10 corresponding to contact surfaces to contact partners are covered with a foil corresponding to the dimensions of the desired contact surfaces. The foils are removed after the subsequent injection molding process with an insulating material. Applicant argues that the wire weave is metal, it is inherent that since the printed board is covered by a housing containing a wire weave which is made of metal, that the printed board is covered by a metal housing.

Applicant also argues that there is no suggestion or motivation to combine Petratos with Jochheim. Again, examiner respectfully disagrees. Both Petratos and Jochheim teach a wireless mobile communication device. Furthermore, both inventions deal with manufacturing the housings of the of circuitry in order to provide increased radio frequency shielding. Therefore, one of ordinary skill in the art would look to Petratos to cure any deficiencies with Jochheim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jochheim (US 6,137,050) in view of Petratos et al. (US 4,680,676).

Regarding claims 1 and 5, Jochheim teaches a radio terminal device (fig. 1) having: a printed board having a front surface and a rear surface (fig. 1, element 7); a resin housing covering the rear front surface of the printed board (element 5); a metal housing covering the front surface of the printed board (element 6 & col. 2, lines 13-16 and lines 60-67); wherein a part of the printed board is accommodated in the resin housing (fig. 1, printed board 7, within element 5); and wherein a remaining part of the printed board is accommodated in the metal housing (col. 2, lines 60-67). However, Jochheim fails to specifically disclose an antenna disposed on a side of the rear surface of the printed board. However, in the same field of endeavor, Petratos teaches an antenna disposed on a side of the rear surface of the printed board (fig. 2, items 284,136, 288; col. 5, lines 16-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include Petratos antenna means with Jochheim's existing radio receiver in order to increase RF reception.

Regarding claims 2 and 6, Jochheim fails to specifically disclose the resin housing and the metal housing are joined with each other by a curved line from a view point of the side of the radio terminal device. However, Petratos teaches the resin housing and the metal housing are joined with each other by a curved line (i.e., depicted in figure 1, items 106c and end corner of item 140 near item 142c, at least formed a curved line) from a view point of the side of the radio terminal device (i.e., when items 102, 124, and 140 are formed together). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Petratos teachings of the resin housing and the metal housing are joined with each other by a curved line from a view point of the side of the radio terminal device in order to provide better curvature to the phone for the user to use.

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Regarding claims 3 and 7, Petratos further teaches the printed board and the metal housing are connect with each other electrically (fig. 2 & col. 6, lines 15-37).

Regarding claims 4 and 8, Jochheim fails to specifically disclose the antenna is disposed near an end portion in the remaining part of the printed board. However, Petratos does disclose the antenna is disposed near an end portion in the remaining part of the printed board (fig. 1, item 136, fig.2 item 136, 184, 288; col. 5, lines 16-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include Petratos antenna means with Jochheim's existing radio receiver in order to increase RF reception.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edan Orgad whose telephone number is 571-272-7884. The examiner can normally be reached on 8:00AM to 5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EDAN ORGAD
PATENT EXAMINER/TELECOMM.

EO *7/11/08*